R. NEIL DAVIES, C.Eng., MICE, P.E.

Remediation Engineering, Environmental Restoration, Process Engineering, Wastewater, Civil, Structural

EDUCATION

Victoria University of Manchester, England: B.Sc. (Hons), Civil Engineering, 1983

Post Graduate Training: Water Industry Training Association (WITA), England - computer modeling and various courses in wastewater design. Cement and Concrete Association, England-design of concrete liquid retaining structures.

PROFESSIONAL REGISTRATION

Georgia P.E. Number 19319 Chartered Civil Engineer (C.Eng) United Kingdom

PROFESSIONAL HISTORY

GeoSyntec Consultants, Atlanta, Georgia, 1995 - Present
Law Environmental, Inc., Kennesaw, Georgia, 1989 - 1995
North West Water, Preston, England, 1986 - 1989
Blackpool Borough Council, Blackpool, England, 1983 - 1986
Blackpool Borough Council/Lancashire County Council, England, 1978 - 1980

REPRESENTATIVE EXPERIENCE

Mr. Davies has extensive experience in the management and direction of large multi-disciplinary projects. In his present role with GeoSyntec, he provides technical leadership and project direction for numerous complex environmental restoration projects. Mr. Davies has also served in a lead technical role for a variety of water, wastewater, and civil infrastructure projects, including: treatment systems; pipelines and water distribution systems; tunnels (including soft-ground tunneling in compressed air); sea outfalls (tunnels and dredged cut); sea defense structures; and earth dam rehabilitation.

Mr. Davies has served in senior technical and project management roles in numerous Remedial Design and Remedial Action (RD/RA) projects conducted under both CERCLA, RCRA, and state regulatory programs. He has developed cost-effective solutions using both conventional and innovative technologies to address both soil and groundwater contamination issues. He has also directed Remedial Investigation/Feasibility Studies (RI/FS) and numerous bench-scale and pilot-scale treatability studies to evaluate the performance of

a variety of remedial technologies under simulated site conditions. His remediation experience includes the practical application of the following technologies: in-situ containment of soft sludges and sediments; stabilization/fixation of contaminated soils and sludges; biotreatment of soils, leachate and contaminated groundwater (pump and treat); physical and chemical treatment of liquids; thermal treatment of contaminated soils; solvent extraction/soil washing processes; in-situ chemical oxidation of groundwater contaminants; and the use permeable reactive barriers for groundwater remediation. Mr. Davies has also assisted several commercial clients in the development and pilot testing of innovative groundwater treatment technologies.

Remediation Engineering and Environmental Restoration

Avtex Superfund Site, Front Royal, Virginia: Mr. Davies is currently serving as Project Director for the design and implementation of a comprehensive closure program for the basins area of this 500-acre former manufacturing facility. The closure involves relocation of soft sludges and insitu closure of the consolidated sludges using a combination of lightweight RCRA-compliant cover systems and a phyto-enhanced soil cover. On-site materials (including fly-ash, demolition debris and soils) are being used to the maximum extent possible in order to minimize costs and avoid disruption to the local community. The project also includes modifications to earth containment dikes to improve their stability. Mr. Davies was responsible for the development of construction documents and assisted the client's representatives with the development of project strategy, contractor selection, and negotiation of construction contracts. Competitive bidding procedures were used to assure compliance with mixed funding requirements.

Following completion of remedial activities, restoration activities will be implemented to provide recreation and conservancy areas in portions of the site formerly used for dewatering and disposal of process sludges. Mr. Davies has assisted with the development of the site redevelopment plans and has participated with other experts, regulators and the general community in the development of these plans through the use of multi-stakeholder involvement, in general accordance with procedures outlined in <u>ASTM Standard E-50.03</u>, "Standard Guide to the Process of Sustainable Brownfields Redevelopment." Although the standard was written with brownfields sites in mind, EPA and other stakeholders agreed that the process was appropriate to use at the site since it satisfied the objective of bringing together all parties concerned in the redevelopment of this sensitive site.

Pharmacia Site, North Haven Connecticut: Mr. Davies is presently serving as Project Director for three inter-related restoration projects at this former pharmaceutical manufacturing facility. The three projects are:

 South Pile Closure – this project involves the planning and development of a closure program to consolidate impacted water treatment sludges located within an existing surface impoundment. Vacuum consolidation techniques are currently being developed

as a means of increasing the shear strength of the contained sludges while lowering the elevation of the impoundment to improve site aesthetics. Once implemented, this will be the first full-scale application of this technology in the U.S.

- Constructed Wetland this project involves the design of a constructed wetland that will be used to: (i) manage both on-site and off-site stormwater; (ii) enhance site aesthetics; and (iii) and may be used as a final polishing step in the treatment of extracted groundwater.
- Erosion/Tidal Protection this project involves the design of various erosion and tidal protection measures for several waste management units located within the site limits and within the river floodplain. Measures will likely include: (i) stabilization and armorment of dike sideslopes using riprap, and vegetation; (ii) reinforced concrete walls; and (iii) sheet piling.

These projects will be implemented as interim measures and integrated into the final corrective measures for the management and closure of this site in accordance with a RCRA permit.

Warner Robins Air Force Base - GeoSyntec is under an indefinite delivery order contract with the Department of the Air Force to provide Architect/Engineer (A&E) services for the Environmental Management Directorate of Robins Air Force Base and other Air Force installations worldwide. These A&E services are for various environmental activities including RCRA facility assessments and investigations (RFAs and RFIs), corrective measures studies (CMSs), Corrective Action Plans (CAPs), Pollution Prevention Studies, and Natural Resources Program support. In addition to typical A&E services, GeoSyntec is also providing services associated with the operation and maintenance of an active remediation system. Mr. Davies presently serves as Principal-In Charge for this Indefinite Delivery/Indefinite Quantity (ID/IQ) Contract. He has also served as Delivery Order Manager for a several delivery orders including:

- The Horse Pasture Site This project involved completing an RFI for the site which consists of SWMU 36 (i.e., Horse Pasture trench disposal sites), SWMU 48 (i.e., miscellaneous disposal sites), and SWMU 49 (i.e., Horse Pasture West of RW15). The Horse Pasture site and these three SWMUs are also collectively referred to as Installation Restoration Program (IRP) site DC34. The project included extensive field investigations and the development of a comprehensive site characterization report that synthesized both new and existing data.
- Free Product Recover and Bioremediation, Building 2070 and 2072 GeoSyntec was retained to design a fixed-base bioremediation system to address the contaminated area. Upon completing a preliminary screening of remedial alternatives, GeoSyntec recommended that other remedial measures be considered for the site in addition to the originally requested bioremediation approach. GeoSyntec performed a Cost Benefit

Analysis to evaluate various remedial alternatives and identify the optimum alternative for overall site remediation and operational cost reduction. The approach selected by Robins AFB, based on GeoSyntec's recommendation, consists of vacuum truck extraction of free product combined with monitored natural attenuation of the dissolved phase plume. Selecting this alternative approach, over the originally requested system will result in life-cycle cost savings of approximately \$600,000 to \$1,000,000.

Lead Slag Remediation – GeoSyntec conducted a detailed investigation of an area of the
Horse Pasture project site where numerous pieces of lead slag had been observed in
surficial soils. The investigation consisted of soil sampling to identify the extent of
debris and soil contamination. GeoSyntec also provided tunkey services to implement
Interim Measures to address potential imminent exposures from the lead slag and
contaminated soils in this area of the site.

DNAPL Recovery Trench, NASA Michoud Facility – Mr. Davies is presently serving as the Principal-In Charge for the design of an innovative DANPL recovery trench located in the 190 Tank Farm Area. The design of the trench incorporates both a collection system for free-phase DNAPL and zero-valent iron media to passively treat dissolved phase constituents. The design addresses complex operational issues due to limited access and congested utilities. It is anticipated that the trench will be constructed late 2003.

Former Coal Tar Processing Facility, Everett, Massachusetts –Mr. Davies served as Principal-in Charge for this project which involves the development of a remedy to mitigate sheen development and satisfy the Massachusetts Contingency Plan (MCP) requirements for either a temporary or permanent remedy for this former coal tar processing facility. Mr. Davies was responsible for the development of project work plans that address site investigations and specialized testing procedures.

Bailey Superfund Site, Port Arthur, Texas: Mr. Davies was the Project Manager responsible for the Revised Remedial Design and Remedial Action phase for the Bailey Superfund Site project (USEPA Region 6). Following the completion of RI/FS activities (conducted by others), USEPA selected a solidification remedy for the site. A Remedial Design was developed (by others), and attempts were made to implement the remedy. Remedial efforts were ceased in 1994 due to technical difficulties associated with the implementation of the original solidification remedy. GeoSyntec was then hired to: (i) conduct a Focused Feasibility Study (FFS) aimed at identifying a more appropriate and implementable remedy; and (ii) develop and implement the Revised Remedial Design. During the course of the FFS, a decision was made to conduct a removal action for a portion of the site. GeoSyntec performed supplemental investigations; developed an off-site disposal remedy; negotiated approvals with state and federal agencies (including two Explanations of Significant Difference (ESDs)); and developed the design for the removal of wastes, which involved the excavation and disposal of tarry waste from the marsh

area and disposal pit. Following completion of the FFS, GeoSyntec developed the Revised Remedial Design for the remainder of the site. USEPA approved the design by issuing an amended Record of Decision (ROD), which was drafted by Mr. Davies. Major elements of the Revised Remedial Design included: a lightweight cap; remediation of hot-spot areas; and erosion and slope protection measures. Mr. Davies managed technical elements of the project during construction, working closely with the Construction Manager, Parsons Engineering Science. The project was completed at a total cost of approximately \$12 million, compared to an estimated \$33 million to implement the original design.

LCP Chemicals Georgia Superfund Site: Mr. Davies was involved in several aspects of the RI and remediation of this CERCLA site, located on the Georgia coast. He served as the Engineer of Record for the design and implementation of a sediment removal action that involved excavation, off-site disposal of sediments, and capping of a 12-acre area of an ecologically sensitive tidal marsh. Soft sediments were removed to depth of 1 ft. using ultra-low ground pressure equipment. Removal areas were pre-defined in advance of excavation activities to allow disposal of non-hazardous materials and characteristically hazardous materials at different facilities. Excavated sediments were then dewatered and conditioned to reduce disposal costs prior to transportation off site. A statistical evaluation of pre-removal sampling data was used to demonstrate the risk reduction resulting from the limited removal action and to eliminate the need for extensive post-remediation confirmation sampling. The project cost was approximately \$8 million.

Olin, Saltville Waste Disposal Site, Saltville, Virginia: Mr. Davies was the Project Manager/Principal responsible for design assistance during the implementation of Operable Unit One of the Saltville Waste Disposal Site. He was also responsible for the production of record documents following implementation of the Remedial Action. Mr. Davies is currently leading the geotechnical design of an innovative capping system for two ponds totaling 140-acres that contain very low strength ammonia soda ash waste contaminated with mercury. The capping system utilizes a landform grading concept with interior drainage, combined with a lightweight cap. The capping system has been designed to minimize the detrimental effects that typically result from total and differential settlement of highly compressive wastes. The estimated construction cost of the capping systems is \$8 million

Hanlin-Allied-Olin Site, Moundsville, West Virginia: Mr. Davies served as Project Manager for the development of and Engineering Evaluation/Cost Analysis (EE/CA) at this former chemical manufacturing site located on the Ohio River in West Virginia. The project involves a detailed site characterization of the 560-acre site that includes: a former chlor-alkali manufacturing area; a chloromethane production area; and 27 closed solid waste management units. Although manufacturing operations ceased some time ago, the site maintains and an active groundwater management system that includes continuous operation of 3 Ranney Wells. Mr. Davies performed a variety of pilot-scale tests to evaluate the efficiency of different groundwater

remedial approaches. A comprehensive remediation program is presently being developed by GeoSyntec and will likely involve extensive improvements to the present groundwater management system, including a comprehensive treatment system, on-site waste disposal facility, and a constructed wetland treatment system. Site restoration may also include redevelopment of selected areas of the site for use as light industrial facilities and a golf/recreational area.

Tenneco Automotive, Hartwell, Georgia: Mr. Davies served as the Associate responsible for the design and implementation of an expansion to a groundwater extraction and treatment system at this active manufacturing facility. Remedial activities were performed in accordance with a Consent Order issued under the Hazardous Site Response Act (HSRA, Georgia). Groundwater extraction wells were strategically located along identified bedrock lineaments to intercept the major pathways for off-site migration of constituents of concern (TCE). The remediation strategy eliminated the need for multiple off-site wells, significantly reducing site remediation costs. Mr. Davies directed the design of a significant upgrade to the existing groundwater treatment system that allows remote operation, and provides treated water for selected manufacturing operations resulting in lower operational costs.

Smiths Farm NPL Site, Louisville, Kentucky: Mr. Davies was the Project Manager responsible for the Remedial Design for the Smith's Farm Operable Unit One CERCLA project (USEPA Region IV). He was responsible for all design-related activities including treatability studies, work plans, and all design deliverables. The project included: the construction of 30 ft. high retaining walls and a RCRA-type cap; a leachate collection system; and the treatment of contaminated soils. Mr. Davies organized and coordinated treatability studies to evaluate the feasibility of incineration, bioremediation solidification/ fixation and chemical treatment of soils contaminated with PCBs, PAHs and lead. Mr. Davies worked closely with the selected remediation contractor to obtain agency approval of the selected soil treatment process, which included low temperature thermal desorption, supplemented by base catalytic dechlorination (BCD) (a process patented by the USEPA). Mr. Davies also organized and coordinated an intrusive investigation into an area containing buried drums. Drums were excavated and sampled to determine the nature of wastes disposed at the site. Mr. Davies was instrumental in negotiating a change to the Record of Decision (ROD) which resulted in estimated savings of \$10 million to the PRPs. Mr. Davies was also the Principal responsible for design-related issues during the Remedial Action phase. The construction cost was approximately \$20 million.

E.H. Schilling Landfill, Ironton, Ohio: Mr. Davies managed the Remedial Design for the E.H. Schilling Landfill CERCLA project (USEPA Region V). Mr. Davies prepared the Work Plan, Sampling and Analysis Plan and other required plans for the Remedial Design of this project. He was responsible for the coordination of design activities that included treatability studies to evaluate the compatibility of the proposed barrier wall materials with site leachate, and studies to determine the most appropriate technologies for treatment of leachate and ground water. He also

managed the preparation of design reports and construction documents for the Remedial Action. This project included: the capping of an existing three acre landfill; improvements to the stability of an earthen dam; a cut-off wall consisting of a slurry wall and grout curtain; and a leachate collection and treatment system (metals precipitation, biological treatment, filtration and carbon adsorption). The construction cost was \$6.5 million. Mr. Davies was also responsible for the management of the Remedial Action phase of this project. Both RD and RA phases of this project were completed on a fast-track schedule and were completed on time and within budget.

U.S. Titanium Superfund Site, Piney River, Virginia: Mr. Davies was the Principal responsible for the U.S. Titanium Site (USEPA Region III). The project included the design of a groundwater interceptor system to collect low pH groundwater contaminated with coppers materials. Collected ground water was treated by a chemical precipitation process.

Innovative Technologies

Permeable Chemical Reactive Wall Pilot Study, Michoud Assembly Facility, Louisiana: Mr. Davies was the project manager for the development of an innovative application of permeable reactive wall technology at this NASA facility operated by Lockheed Martin. GeoSyntec was retained to develop a pilot study using permeable reactive wall technology for the passive treatment of groundwater contaminated with TCE. The impacted groundwater was found to be entering a leaking storm sewer system by infiltration, resulting in non-compliant water discharges. GeoSyntec developed and implemented a pilot study that involved the replacement of a storm sewer manhole with a purpose-fabricated manhole structure that incorporated a zero-valent iron surround. The new manhole was designed to allow controlled infiltration resulting in passive treatment of the TCE-impacted groundwater. The pilot test was successfully completed and Lockheed Martin is presently evaluating the potential for expanding the scope of this remedial approach at this facility.

In-Situ Cleanup of Petroleum Contaminated Soil and Ground Water Using Alcohol Flooding: Mr. Davies was a principal investigator for a research project funded by the National Science Foundation (Award Number DMI-9561796). The project involved the development and implementation of a bench-scale testing program to evaluate the effectiveness and ability to control alcohol flooding as a potential remedial technology. The project demonstrated the effectiveness of this technology and illustrated how it could be applied to the remediation of both LNAPL and DNAPL impacted sites.

Centrifugal Bioreactor Evaluation, KBI, Inc., Atlanta, Georgia: Mr. Davies was retained to perform an independent technical evaluation of an innovative water treatment process that involved the use of a centrifugal bioreactor. The assignment also included evaluating the commercial potential of this process in the remediation, nuclear, mining and pharmaceutical industries. The

process uses a centrifuge and counteracting pressurized flow to concentrate microbes in a productive cell bed. The process developers have demonstrated process efficiencies that make the process cost-effective compared to other more conventional treatment techniques. The process has been shown to be effective in the treatment of both organic and inorganic constituents, including centrate, MTBE, nitrates, heavy metals, and radionuclides. In addition, the process has the potential for use in the pharmaceutical industry as an effective means of developing concentrated cell cultures. Various pilot scale evaluations are presently ongoing.

Environmental Litigation Support and Cost Allocation

Sand Springs Superfund Site, Confidential Client: Mr. Davies prepared detailed opinions of cost for submittal as evidence in a litigation case related to the Sand Springs CERCLA site, Oklahoma. Cost opinions were prepared for a range of potential alternatives including: stabilization, on-site and off-site incineration and site restoration.

Landfill and Material Reclamation

Berryville Landfill reclamation Feasibility Study, Virginia: Mr. Davies managed the development of a Feasibility Study to evaluate landfill reclamation activities at a former landfill site in Virginia. The project involved a field pilot study to evaluate the application of various waste separation processes, followed by studies to evaluate composting and waste-to-energy as potential waste recycling options. The client has requested that further details of this project remain confidential at this time.

Eastern Diversified Metals Superfund Site, Hometown, Pennsylvania: Mr. Davies was the Principal responsible for the development of a conceptual design for the Eastern Diversified Metals CERCLA project (USEPA Region III). The project involved the development of reclamation processes for full-scale recycling of a 7-acre wire fluff pile and the treatment of hazardous residuals. The project required the development of various separation processes to segregate the pile constituents.

Design of Solid Waste Landfills

Industrial Waste Landfill, Mt. Pleasant, Tennessee: Mr. Davies was the Principal responsible for the design of a 100,000 cubic yard landfill designed to meet RCRA Subtitle C standards, located in Tennessee. The client has requested that further details of this project remain confidential.

Bolton Road Landfill, Atlanta, Georgia: Mr. Davies was the Project Engineer for the design of a 50-acre sanitary landfill located in Atlanta, Georgia. Mr. Davies was involved in the preparation of the Design and Operational Plans, and calculations for state permitting.

Wastewater Design, Construction Management and System Modeling

Ulverston and Glaxo Pharmaceuticals WWTP, Cumbria, England: Mr. Davies was design team leader responsible for the structural and hydraulic design of a wastewater and industrial effluent disposal plant located in Ulverston, Cumbria, England. The project cost was approximately \$7.2 million and included the construction of two large reinforced concrete tidal storage tank, two sea outfall pipelines, pumping stations and other associated structures. Mr. Davies was responsible for all structural and hydraulic design. He was also responsible for specification writing and bid evaluation.

Sedgewick WWTP, Cumbria, England: Mr. Davies was the Project Engineer for a wastewater treatment plant (activated sludge) located in Sedgewick, Cumbria, England. Mr. Davies was responsible for design of the process units, including a reinforced concrete oxidation ditch. He was also responsible for daily supervision of the design team. The project cost was approximately \$3.2 million.

NWW Sewer Infrastructure Renovations, England: Mr. Davies was the Design Engineer responsible for the structural and hydraulic design of several sewage rehabilitation and improvement projects located in Lancashire and Cumbria, England. Some of these projects involved relining existing sewers and tunnels. Projects costs ranged from \$24,000 to \$4.2 million.

Lytham Road Sewer, Blackpool, England: Mr. Davies was the Design Engineer and later Resident Engineer for the construction of 1-1/2 miles of relief sewers (4' to 8' diameter), in the Lytham Road Drainage area of Blackpool, England. Construction methods included open cut, tunneling (compressed air), and pipe jacking. The project cost was \$4.2 million. He was responsible for quality control, site safety, and approval of payments due to Contractors. Mr. Davies was also responsible for the structural and hydraulic design of various elements of this project. Following completion of this project, Mr. Davies was responsible for the negotiation/settlement of several construction claims resulting from unforeseen ground conditions. All claims were successfully negotiated and settled without litigation or arbitration.

Drainage Area Models, Blackpool, England: Mr. Davies was the Project Engineer responsible for the development of two mathematical models used for the evaluation of drainage area improvements in Blackpool, England. Models were developed using the Wallingford Storm Sewer Package (WASSP). Mr. Davies was also Project Manager for a research project,

performed in conjunction with North West Water, which focused on the verification of these models through the use of in-situ flow measuring devices. Mr. Davies later utilized the models for the development of a strategic plan for drainage area improvements. The models were subsequently used for the detailed hydraulic design of new trunk sewers and off-line storage tanks used to attenuate peak flows. Mr. Davies wrote a technical paper on the model verification process, and was awarded the 1986 Miller Prize for this work by the Institution of Civil Engineers.

Geostructural Design

Day Creek Culvert, Riverside, California: Mr. Davies was the Project Manager/Principal Design Engineer for the design of the Day Creek Culvert located in California. This project involved the use of a complex micro-tunneling system to construct a double box culvert beneath active railroad lines with minimal cover. The design also had to accommodate the removal of a massive bridge abutment structure which was buried beneath the railroad tracks and traversed the box culvert at its mid point. Construction cost was approximately \$2 million.

Lytham Road Sewer, Phase II, Blackpool, England: Mr. Davies was a Design Engineer for the Lytham Road Sewer, Phase II. Mr. Davies performed various hydraulic and structural design tasks, including the development of a comprehensive sewer system model for the entire drainage area. He also managed the site investigation for a section of tunnel that was later constructed using tunnel boring machines (TBM).

Marine Engineering and Sea Defenses

Ulverston and Glaxo WWTP Outfall Pipeline: Mr. Davies was Project and Field Engineer on a subsurface investigation for two marine outfall pipelines located in Cumbria, England. Tasks included planning of field operations, observation of field tests, and report writing. Drilling was carried out from pontoons in a river estuary. The work required careful planning due to strong currents, and a high tidal range.

Sea Defense Improvements, Blackpool, England: Mr. Davies was the Design Engineer for the design of sea defense structures located in Blackpool, England. This project involved the reconstruction and replacement of approximately 1 mile of reinforced concrete sea walls. The project cost was \$3.2 million. Mr. Davies was Assistant Resident Engineer for the construction of this project.

Structural Evaluation/Design

Lido Municipal Complex, Blackpool, England: Mr. Davies was the structural engineer responsible for the evaluation of a swimming pool and shopping center complex that suffered structural damage as a result of an earth tremor. The facility was located in Blackpool, England. Mr. Davies also prepared the structural design for the complete refurbishment of this facility.

Water Resources and Water Supply

Palm Beach Surface Water drainage, Florida: Mr. Davies was the Project Engineer for the design of improvements to a surface water drainage ditch system, located in Florida. The project included approximately 3,500 linear ft of concrete ditch lining, the replacement of culverts and headwalls, the use of grout blankets, and the relocation of water mains. The project was \$250,000.

Appleby Water Supply, Cumbria, England: Mr. Davies was a Design Engineer involved in the planning and hydraulic design of a water supply project located in the Lake District National Park, England. The project involved the construction of pipelines and ancillary structures to upgrade an existing supply system. The project cost was \$320,000.

AFFILIATIONS

American Concrete Society - Member
Institution of Civil Engineers (UK) - Member
Georgia Water and Pollution Control Association – Member
National Groundwater Association - Member

AWARDS

1978 Civil Engineering Prize - WR Tuson College, England

1985 Miller Prize - Institution of Civil Engineers, England

PUBLICATIONS

- 86-1 Davies, R.N., "The Verification of Sewer System Computer Models Using Rain Gauges, and Sewer Flow Monitors", Institution of Civil Engineers, Miller Prize Winner, 1986.
- 94-1 Davies, R.N., "Additional Data Collection at Superfund Site Allows Innovative Design Resulting in Cost Savings", Emerging Technologies in Hazardous Waste Management VI, American Chemical Society, 1994.
- 94-2 Davies, R.N. and Valdez, A.J., "Construction Management for Remedial Action at a Superfund Site located in Ohio", Emerging Technologies in Hazardous Waste Management VI, American Chemical Society, 1994.
- 95-1 Davies, R.N. and Sargent, T.N., Jr., "Practical Application of New and Emerging Technologies in the Treatment of Soils and Ground Water", Emerging Technologies in Hazardous Waste Management VII, American Chemical Society, 1995.
- 96-1 Lucia, P.C., Davies, R.N. and Grubb, D.G., "In-Situ Cleanup of Petroleum Contaminated Soil and Ground Water Using Alcohol Flooding", submitted to the National Science Foundation in fulfillment of Award Number DMI-9561796, 1996.
- 96-2 Grubb, D.G., and Davies, R.N. "In-Situ Cleanup of Petroleum Contaminated Soil and Ground Water Using Alcohol Flooding", International Symposium: Soil Protection and Remediation, Metatechnies 96, Bordeaux, France, 1996.
- 97-1 Grubb, D.G., Empie, L.E., Hudock, G.W., Davies, R.N., and Lathrop, S.B. "Two-Dimensional Ethanol Floods of Toluene in Homogeneous Unconfined Aquifer Media", In-Situ Remediation of the Geoenvironment, Minneapolis, Minnesota, 1997.
- 99-11 Murphy, M., Schroeder, E., Davies, R.N. "Environmental Restoration Of North Marsh Area Bailey Superfund Site, Orange County, Texas", Wetlands and Wetlands Remediation, Salt Lake City, 1999.